

DECLARATION

I, JOHN ALFRED RICHES, Fellow of the Institute of Linguists, of Oak Farm, Catfield, Great Yarmouth, Norfolk, England, do hereby declare that I am conversant with the English and German languages and am a competent translator thereof. I declare further that the following is a true and correct translation made by me of international patent application PCT/DE2003/03184.

Signed this 25th day of August, 2004.



---

DT13 Rec'd PCT/PTO 22 FEB 2005

ROCKING CHAIR

The invention relates to a rocking chair with an oscillating base, a seating surface fixed thereto and a back rest according to the preamble of the main claim.

Such rocking chairs differ from those which normally have arcuate runners in the lower region on which they can oscillate backwards and forwards in that they are provided in a base with a swinging or oscillating mechanism enabling them to be installed on carpets, where a conventional runner-type rocking chair would be excessively decelerated, so as to enable rocking to take place in much the same way as with a conventional rocking chair. However, unlike in the case of the latter the back rest stays in its horizontal inclination and the latter does not change during rocking.

Conventionally oscillating bases with oscillating, pendulum or tension parallelograms are used, where soon an unsteady impression is given to the chair as a result of the numerous lever arms and joints. This is not desired and what is in fact is required is a steady rocking adapted to a soft, easy chair, together with long-term durability.

The problem also arises that some of these rocking chairs and in particular those made from wood, constructed with rods which closely slide past one another and in which small children, pets or even the user can unintentionally engage or intervene and can be subject to significant injury levels during chair movement.

Therefore the problem of the invention is to provide a stable construction for a rocking chair where such disadvantages do not arise. At the same time a very comfortable, far-reaching oscillating movement with low overall height is to be ensured.

This problem is solved with a rocking chair having the features of the main claim. Advantageous developments are provided by the subclaims.

It is particularly advantageous that a downwardly open, U-shaped holding device has a holding arc with struts to the seating surface and serves as a central fixing and covering device, whilst also being constructed in such a solid way that there can be no clearance between the seating surface and the holding arc. Said holding arc is constructed with flat legs, which at their downwardly open ends are connected to the lower section of an oscillating parallelogram, so that joints or articulations are only tension loaded.

Thus, in T-shaped manner the end sections of the holding arc are connected with elements at right angles thereto, extending substantially parallel to

the floor and still firmly connected to the seating surface, whereby to said elements are attached by means of swivel joints and in substantially vertical manner rods which are inclined outwards away from the centre of the holding arc and preferably in the upwards direction and which in an upper area of the oscillating parallelogram and just below the seating surface are connected to cross-members, which are located on a supporting column, in which there may optionally be a vertical adjustment, and can be rotated with respect to a base plate, but whose inclination is fixed with respect to the floor.

As a result of the inclined oscillating rods with an arrangement at the end of the cross-member, it is ensured that even with the maximum rocking movement, the U-shaped arc cannot so closely correspond with the upper ends of the oscillating support that jamming in is possible. In the lower area the U-shaped arc is connected to the support elements, so that also here the oscillating rods cannot jam.

As a result of the chosen, flat construction of the U-shaped holding arc, there can also be no jamming contact with the supporting column.

According to a preferred embodiment on the U-shaped holding arc is also provided a locking bolt with a handle projecting over the casing, so that the bolt mounted on the holding arc can engage in corresponding bolt receptacles on the cross-member fixed to the column. The bolts are preferably constructed in such a way that a rod operated with the handle engages in the same way in both cross-members enabling the chair to be locked in a specific oscillating position.

To additionally avoid engagement in the mechanism, a fixed casing can be attached to said cross-members, which are still fixed with respect to the base plate, but optionally rotatable with the cross-members, having solely in an upper area where the struts are provided between the legs and the U-shaped holding arc one or more optionally slot-like openings through which the struts can pass when rocking.

Laterally and in particular adjacent to the oscillating rods the casing always has a covering action, so that no engagement is possible. In its lower region the casing extends to just above a base plate and can optionally also be provided with a brush-like edge to ensure that no dust penetrates from below into the casing. Simultaneously, during chair rotation, dust is cleaned from the base plate in this way.

The desired rigidity of the means results more especially from the extremely stably constructed, lower longitudinal sections of the oscillating parallelogram preferably welded over a long area of the flat lateral surface of the U-shaped holding arc. There are only eight swivel points in the

parallelogram lever system which are located in the four extremities of the oscillating rods and are uniformly loaded during oscillation. The U-shaped holding arc ensures that transverse loads are uniformly introduced into the parallelogram lever system.

Further advantages and features of the invention can be gathered from the following description of a preferred embodiment relative to the attached drawings, wherein show:

- Fig. 1      A perspective view of a rocking chair according to the invention with a still uncased oscillating base.
- Fig. 2      A view of the back rest, where the casing is shown as a broken line element surrounding the oscillating base.
- Fig. 3      A view corresponding to fig. 1 where the rear or trailing edges are shown in broken line transparent form.
- Fig. 4      A view from the side, where it is once again possible to see the shape of the circular casing in the upper area of the oscillating system, together with the sloping arrangement of the oscillating rods.

The rocking chair shown in fig. 1 rests with its base plate 26 on a random floor surface. The seating surface 12 and back rest 14 are connected by means of struts 28 (which unlike what is shown in the drawing preferably engage on the arm rests) with a U-shaped, downwardly open holding element 16 are connected to an oscillating parallelogram. The latter has four oscillating rods 18, which are positioned substantially vertically, but in the upper area in outwardly sloping manner between cross-members 20, 22. In not shown manner, the seating surface and back rest are provided with a conventional recliner mechanism, which in the case of a rearward inclination of the back rest advances the seating surface, so that the centre of gravity is maintained.

In fig. 2 the same structure is shown from the back. Additionally there is a casing shown in broken line form and carrying the reference numeral 32, which engages closely on the U-shaped holding arc, but which preferably at point 34 is not fixed to said holding arc, but instead to the cross-members 22 fixed to the base plate, but optionally rotatable.

Fig. 4 shows the casing 32 in perspective. Fig. 5 shows from the side the top of the casing 32 constructed arcuately in the vicinity of the holding arc for providing a movement possibility for the struts 28. It is clearly possible to see the oscillating parallelogram with the oscillating rods 18

between the upper cross-member 22 and the lower cross-member 20, the holding arc 16 already being moved slightly forwards with respect to the column 24.

In a preferred, not shown embodiment a bolt is provided on the holding arc 16 and is preferably equipped with two projections or stud portions engaging in corresponding, multiply provided notches or holes, so as to lock the chair in a random position. For this purpose, in much the same way as the top of the casing 32, the element 22 can be arcuately constructed corresponding to the oscillating movement of element 16. Alternatively an additional arcuate perforated rail can be provided.

In a preferred embodiment there is also a movement-synchronized foot stool, which can also be attached in the holding arc 16 by means of corresponding stable struts. A reliable fixing of the struts can be ensured by a width of the lateral portions of the holding arc substantially corresponding to the width of the arm rests, i.e. representing a multiple of the oscillating rod width.